**Topics Test #1: Data Collection and Manipulation**

1. Sketch and label the lab equipment that would be required to heat a solid chemical until it glows red.

2. In your opinion, which is better: precise measurements or accurate ones? Explain your answer.

3. What should you do if somebody catches fire in the lab?

4. How many significant figures do each of the following numbers have? What precision do they indicate?

|  |  |  |
| --- | --- | --- |
| Measured value | Number of sig figs | Precision indicated |
| 340 km |  |  |
| 34.0 km |  |  |
| 3.00 x 104 km |  |  |
| 3040 km |  |  |
| 3040.0 km |  |  |

7. Why do you believe the class had such difficulty measuring length to the correct number of significant figures? Explain your answer.

8. Why would it be wrong for me to write that my weight was 80 kg if I measured it on a bathroom scale?

9) Why can I estimate one digit when taking measurements?